

THE CLAIMS:

While no amendments, additions or cancellations of claims are effected via this paper, this listing of claims is provided for the convenience of the Examiner.

1. (Original) A method for performing handover of a wireless terminal in a telecommunication system, in which a terminal is provided with a connection to a first access device, from which a tunnel is arranged to a corresponding host for data transmission of the terminal, and wherein

a tunneling IP address is allocated in the first access device for a tunnel to be formed for the data transmission of the terminal, to which tunneling IP address the tunnel is bound, the method comprising:

transferring at least the tunneling IP address from the first access device to a second access device in response to detecting a need to change the connection of the terminal to be carried out by the second access device;

determining a binding in the second access device between the tunneling IP address and a network interface of the second access device, and

updating the information concerning the new binding between the network interface of the second access device and the tunneling IP address for at least one network node in the system.

2. (Original) A method as claimed in claim 1, wherein tunnelling attributes, at least an IP address of the corresponding host and the tunnelling IP address allocated to the terminal in the first access device, are determined in an authentication server as a part of the authentication of the terminal before arranging the tunnel to the corresponding host,

the tunnelling attributes are transferred to the first access device in response to a successful authentication,

the IP address used in the data transmission of the terminal and the tunnelling IP address for the tunnel to be formed for the data transmission of the terminal that is used as

an end point of the tunnel transferring data of the terminal are allocated in the first access device to the terminal,

the tunnel determined by the tunnelling attributes is bound in the first access device to the tunnelling IP address,

the tunnel, whose end points include the tunnelling IP address and the IP address of the corresponding host, is formed and thereafter the data transmission to the tunnelling IP address is transferred to a network interface of the first access device.

3. (Original) A method as claimed in claim 1, the method further comprising:

transferring data between the terminal and the corresponding host using the binding configured to the second access device after updating.

4. (Original) A method as claimed in claim 1, wherein the network node is a router in a local network.

5. (Original) A method as claimed in claim 1, wherein said binding refers to binding between a MAC address of the network interface and the tunnelling IP address.

6. (Original) A method as claimed in claim 1, wherein the system supports an IPv6 protocol, whereby the information concerning the new binding is sent to at least one network node connected to the first access device and to the second access device to the routing table thereof using a Neighbour Discovery protocol.

7. (Original) A method as claimed in claim 1, wherein the system supports an IPv4 protocol, whereby the information concerning the new binding is sent to at least one network node connected to the first access device and to the second access device to an ARP table (Address Resolution Protocol) thereof using an ARP protocol.

8. (Original) A method as claimed in claim 1, wherein the first access device and the second access device are access points of a wireless local network connected to one another through a wired local network.

9. (Original) A telecommunication system comprising at least a first access device, a second access device and a terminal, in which system the first access device is configured to provide the terminal with a connection,

the first access device is configured to allocate a tunnelling IP address for the tunnel to be formed for the data transmission of the terminal, to which tunnelling IP address the tunnel is bound,

the first access device is configured to form a tunnel between a corresponding host and the first access device for data transmission of the terminal,

the first access device is configured to transfer at least the tunnelling IP address to a second access device in response to detecting a need to change the connection of the terminal to be carried out by the second access device;

the second access device is configured to form a binding between the tunnelling IP address and the network interface of the second access device, and

the second access device is configured to update the information concerning the new binding between the network interface of the second access device and the tunnelling IP address for at least one network node in the system.

10. (Previously presented) A telecommunication system as claimed in claim 9, wherein the transmission of data between the terminal and the corresponding host after updating is configured in the telecommunication system using the binding configured to the second access device.

11. (Original) A telecommunication system as claimed in claim 9, wherein the network node is a router in a local network.

12. (Original) A telecommunication system as claimed in claim 9, wherein said binding refers to the binding between a MAC address of the network interface and the tunnelling IP address.

13. (Original) An access device for a telecommunication network, wherein the access device is configured to provide a terminal with a connection,

the access device is configured to allocate a tunnelling IP address for the tunnel to be formed for the data transmission of the terminal, to which tunnelling IP address the tunnel is bound

the access device is configured to form a tunnel between a corresponding host and an access device for data transmission of the terminal, and

the access device is configured to send at least said tunnelling IP address to a second access device in response to detecting a need to change the connection of the terminal to be implemented by the second access device.

14. (Original) An access device as claimed in claim 13, wherein said binding refers to the binding between a MAC address of the network interface and the tunnelling IP address.

15. (Original) An access device as claimed in claim 13, wherein the access device is configured to change the binding of the tunnelling IP address to temporarily denote the network interface of the second access device.

16. (Previously presented) An access device for a telecommunication network comprising means for providing a terminal with a connection and means for forming a tunnel between a corresponding host and an access device for data transmission of the terminal, wherein the access device is configured to receive at least a tunnelling IP address allocated for a tunnel for the data transmission of the terminal in response to detecting a need to change the connection of the terminal to be implemented by the access device,

the access device is configured to form a binding between the tunnelling IP address and the network interface, and

the access device is configured to update the information concerning the new binding between the network interface and the tunnelling IP address to at least one network node included in the system.

17. (Original) An access device as claimed in claim 16, wherein the access device is configured to transfer data after updating between the terminal and the corresponding host using the binding formed.

18. (Original) An access device as claimed in claim 16, wherein said binding refers to the binding between a MAC address of the network interface and the tunnelling IP address, whereby

the access device is configured to send the information concerning said binding using an ARP protocol or a Neighbour Discovery protocol.

19. (Previously presented) A communications apparatus comprising a processor and memory, wherein the apparatus is configured to form a tunnel between a corresponding host and an apparatus for data transmission of a terminal,

the apparatus is configured to receive at least a tunnelling IP address allocated for a tunnel for the data transmission of the terminal in response to detecting a need to change the connection of the terminal to be implemented by the apparatus,

the apparatus is configured to form a binding between the tunnelling IP address and the network interface, and

the apparatus is configured to update the information concerning the new binding between the network interface and the tunnelling IP address to at least one network node included in the system.

20. (Previously presented) An apparatus as claimed in claim 19, wherein the apparatus is configured to transfer data after updating between the terminal and the corresponding host using the binding formed.

21. (Previously presented) An apparatus as claimed in claim 19, wherein said binding refers to the binding between a MAC address of the network interface and the tunnelling IP address, whereby
the apparatus is configured to send the information concerning said binding using an ARP protocol or a Neighbour Discovery protocol.

22. (Previously presented) An apparatus as claimed in claim 19, wherein the apparatus is configured to support an IPv6 protocol, and the apparatus is configured to send the information concerning the new binding to at least one network node by using a Neighbour Discovery protocol.

23. (Previously presented) An apparatus as claimed in claim 19, wherein the apparatus is configured to support an IPv4 protocol, and the apparatus is configured to send the information concerning the new binding to at least one network node to an ARP table (Address Resolution Protocol) thereof by using an ARP protocol.

24. (Previously presented) An apparatus as claimed in claim 19, wherein the apparatus is an access point of a wireless local network connected to another access point through a wired local network.

25. (Previously presented) An apparatus as claimed in claim 19, wherein the network node is a router in a local network.